

EPA Region 6's Environmental Services Branch Laboratory (Houston Lab)

State & Tribe Assistance Examples

Prepared January 29, 2018 - DRAFT

REQUEST

The Houston Lab has continuously provided crucial support to the states for a variety of issues/incidents, many of which made national news and garnered significant congressional interest. Region 6 respectfully requests that the Houston Lab's lease be renewed and continue to function in its current capacity.

SUMMARY

- Arkansas
 - Ongoing assistance with Bella Vista/Trafalgar Road fire.
 - Hosted meeting, provided technical assistance, and gave lab tour to ADEQ.
- Louisiana
 - Provided variety of assistance during Hurricanes Katrina and Rita, including performing drinking water analyses while state lab was not operational.
 - Provided extensive analyses in response to the Deepwater Horizon incident and co-developed a method to test for a key component of the dispersant used on the oil.
- New Mexico
 - Provided sampling in response to the Gold King Mine incident in both 2015 and 2017, as well as aided a private lab that had issues due to their limited capacity.
- Oklahoma
 - The Houston Lab has agreed to support the ODEQ State Environmental Laboratory with backup analysis capability for semi-volatiles.
 - The Houston Lab assisted ODEQ with sample analysis during Red River fish kill investigation and engaged ORD in a research project to help identify the source of the fish kills.
- Texas
 - In response to Hurricane Harvey, provided vital support to the TCEQ, including rapid response to Superfund sites, deployment TAGA and PHILIS, and assisting with drinking water samples.
 - Per TCEQ's request, provided around the clock analysis services for 200+ drinking water samples collected during the Corpus Christi drinking water incident.
 - When the Craft-Turney Water Supply Corporation issued a Do Not Use order on 16 connections, the Houston Lab assisted the TCEQ with drinking water sample analyses.
- Tribes
 - Providing lead analytical services for the 3Ts (Training, Testing, Telling) for Reducing Lead in Drinking Water in Schools Project with ~1,000 samples to be collected from drinking water fountains at 85 tribal schools.
 - Supports Region 6's Tribal SDWA Program by conducting annual lead and copper analyses.
- State & Tribal Drinking Water Certification
 - Responsible for certification of State and Tribal Drinking Water Laboratories.
 - Each state has a lab certified by the Houston Lab, as well as the Pueblo of Sandia.
- 2017 Water Laboratory Alliance Security Summit
 - Hosted the 2017 Summit.

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DETAILED BRIEFING

Arkansas

Bella Vista/Trafalgar Road Fire – December 2018-Present

- The Houston Lab aided the Superfund Program by providing technical assistance and air sampling support for volatile organic compounds at the stump dump fire.
- The Houston Lab prepared summa canisters with 24-hour flow control valves and subsequent analysis for benzene, but the summa canisters ultimately were not used due to both citizens' requesting the sampling include particulates and a delay in sampling caused by inclement weather (Superfund rented data rams for particulate sampling).

ADEQ Technical Assistance Meeting – March 2018

- The Houston Lab hosted a meeting with ADEQ's laboratory management personnel, where technical assistance was provided on items including Laboratory Information Management Systems, Laboratory Continuity of Operations Plans, EPA's Water Laboratory Alliance, instrumentation excess, and mutual support agreements.
- A tour of the Houston Lab was also conducted for ADEQ.

Louisiana

Hurricane Response – Ongoing

- The Houston Lab provided analytical services for the emergency response efforts associated with Hurricanes Katrina and Rita, performing quick turn-around testing of flood waters for coliforms and E. coli.
- The Louisiana Department of Health (LDH) laboratory was not operational post-Hurricane Katrina, necessitating the Houston Lab to provide drinking water analyses for LDH.
- The Houston Lab supported the LDH drinking water lab with lead & copper testing and housed 2 LDH analysts to help process LDH samples.
- The Houston Lab's mobile laboratory was deployed to both Hurricanes Katrina and Rita responses to provide on-site coliform and E. coli testing of drinking water wells.

Deepwater Horizon Response – April 2010 (initial spill date)

- The Houston Lab provided a range of analyses, including Toxicity Characteristic Leaching Procedure (TCLP) of materials used or collected, as well as more routine analysis, with totals done on a 5-day turnaround time (TAT) for water, sediment, and oil/mousse/tar balls.
- TCLP was a 10-day TAT, done on boom, tarp, rope, gloves, sand, and tar balls.
- Total Petroleum Hydrocarbons was conducted for diesel range organics and oil range organics.
- Toxicity by Quiklite (setup new method to give acute results in 24 hours) and chronic toxicity using Sheepshead was conducted on Gulf water samples.
- The Houston Lab co-developed a method to test for a key component of the Corexit dispersant used on the oil.

New Mexico

Gold King Mine – 2015 & 2017

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- In 2015, due to concern about mine waste leaching into local groundwater wells near the San Juan River in New Mexico, Region 6 collected drinking water well samples for testing.
- When a private lab had difficulty with their data packages and limited capacity, the Houston Lab provided retesting of some of the samples in a Quality Control role to confirm the results.
- Two sets of 11 samples were priority analyzed with final reports provided within 48 hours of receipt.
- In 2017, 10 water samples for metals from the Animas & San Juan River site located in New Mexico. NMED collected the samples for the Houston Lab to conduct an analysis of metals, and NMED used Houston Lab services to inform their evaluation of impacts on agricultural uses in the Animas and San Juan River watersheds.

Oklahoma

Semi-Volatile Analysis Backup

- The Houston Lab has agreed to support the ODEQ State Environmental Laboratory with backup analysis capability for semi-volatiles.

Red River Fish Kill – Date

- The Houston Lab assisted ODEQ with sample analysis during the investigation of the Red River fish kill and engaged ORD in a research project to help identify the fish kill source.

Texas

Hurricane Harvey Response – August 2017 (landfall)

- As soon as the Houston Lab could reopen after landfall, the Houston Lab began providing support by (1) housing ~30 community liaisons deployed to support county incident command centers, (2) procuring sampling materials and assembling kits for collection of drinking water samples, (3) housing and supporting EPA's national assets of TAGA (mobile air monitoring laboratories) and PHILIS (mobile analytical laboratory) deployed to the scene, (4) providing data validation for rapidly assessing Superfund sites, and (5) deploying staff who served on debris removal monitoring teams.

Corpus Christi Drinking Water Incident – December 2016

- Per TCEQ's request, the Houston Lab provided around-the-clock analysis services for 200+ drinking water samples collected during the incident, including confirmatory sampling sites and complaint verification sampling.
- The Houston Lab developed 2 new, time critical, analytical chemistry methods to detect Indulin AA-86, which was suspected of contaminating Corpus Christi's drinking water distribution system.

Craft-Turney Water Supply Corporation (Craft-Turney) Drinking Water Incident – Date

- Craft-Turney, located in Cherokee County, TX, issued a Do Not Use order on 16 connections related to a Methylene bis-thiocyanate (MBT) back siphonage event at the Arrington Sawmill, and the Houston Lab was tasked to assist TCEQ with drinking water sample analysis for MBT.
- The Houston Lab developed a gas chromatography analysis method for MBT and analyzed 35 samples for TCEQ with an expedited 24-hr turn-around-time.

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Tribes

3Ts (Training, Testing, Telling) for Reducing Lead in Drinking Water in Tribal Schools Project

- The Houston Lab is providing analytical services for the Project with ~1,000 samples to be collected from drinking water fountains at 85 tribal schools for lead analysis.
- To date, 172 sample containers have been sent to 26 schools for the collection of samples with additional containers expected to be sent to schools in 2019.
- In return, the Houston Lab has received 160 drinking water samples for lead analysis from 25 schools and of those, has reported data for 113 samples from 19 schools.
- The Houston Lab recently provided preliminary data for 3 samples from 3 schools, which have results for lead above the treatment technique level of 15.

Tribal Safe Drinking Water Act (SDWA) Program

- The Houston Lab supports Region 6's Tribal SDWA Program by conducting annual lead and copper analyses as scheduled by the program and collected and submitted by Region 6 tribes.
- Customarily, 5-10 drinking water samples for lead, copper, and turbidity analysis are submitted from established locations within Pueblos and Tribes of New Mexico and Oklahoma.

State & Tribal Drinking Water Certification

Houston Lab Drinking Water Certification

- The Houston Lab has responsibility for certification of State and Tribal Drinking Water Labs.
- Certification audits of principal state and tribal labs are performed once every 3 years and technical assistance to the States' EPA-certified drinking water labs is provided as needed.
- Labs must conduct testing for compliance with SDWA to receive certification.
- Oversight of state drinking water certification programs includes review of state certification programs performed annually by questionnaire and on-site every 3 years to determine the adequacy of state programs for certifying labs.

State Laboratories Certified by the Houston Lab

- Arkansas Department of Health, Little Rock, AR;
- Louisiana Department of Health, Baton Rouge, LA;
- New Mexico Department of Health (Scientific Lab Division), Albuquerque, NM;
- Oklahoma Department of Environmental Quality, OK City, OK; and
- Texas Department of State Health Services, Austin, TX.

Tribal Laboratory Certified by the Houston Lab

- Pueblo of Sandia WWTP Laboratory, Bernalillo, NM.
- With agreement of Pueblo of Sandia, New Mexico Department of Health (NMDH), and the Houston Lab, the certification audit of the Pueblo of Sandia WWTP Lab is conducted by NMDH, and the certification is issued by the Houston Lab based on the NMDH audit report.
- The Pueblo of Sandia WWTP Lab is certified to analyze drinking water compliance samples for total coliforms and E. coli.

2017 Water Laboratory Alliance (WLA) Security Summit

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- The WLA, which is a part of the Environmental Response Laboratory Network (ERLN), is a nationwide network of labs that serves the water sector.
- This network helps labs and utilities respond to water contamination events involving chemical, biological, and radiochemical contaminants.
- The Houston Lab, in conjunction with Water Security Division, hosted the 2017 WLA Security Summit, with the centerpiece being a Tabletop Exercise “The Unexpected Storm: Hurricane Watt” that demonstrated elements of the WLA Response Plan intended for practical application with the Houston Lab.